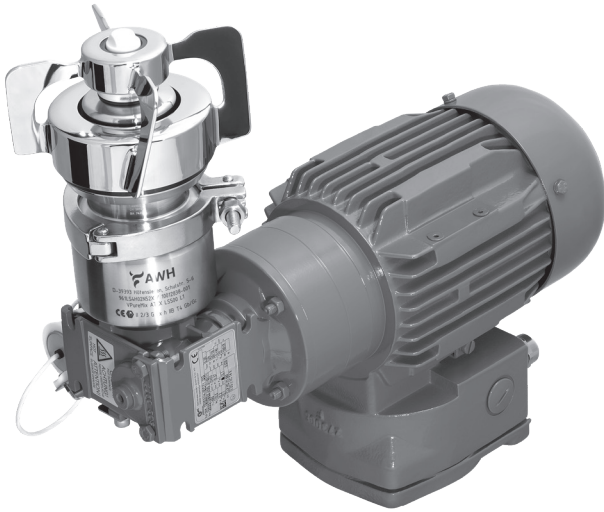


Product Description VPureMix® ATEX Magnetic Coupled Mixer

VPureMix® ATEX Magnetic Coupled Mixers for potentially explosive Atmospheres



In addition to the standard VPureMix® magnetic coupled mixers, AWH also offers VPureMix® ATEX magnetic coupled mixers for use in potentially explosive atmospheres.

The use of an ATEX-compliant magnetic field sensor (optionally available) and type-tested gear motor enables the use of VPureMix® ATEX magnetic coupled mixers inside tanks with explosive atmosphere zone 1 (equipment category 2G) as well as zone 2 outside of tanks (equipment category 3G) according to directive 2014/34/EU.

II 2/3G Ex h IIB T4 Gb/Gc

Model Overview

Type	VPureMix® ATEX LS30	VPureMix® ATEX LS50	VPureMix® ATEX LS100	VPureMix® ATEX LS500	VPureMix® ATEX LS1000	VPureMix® ATEX LS2000	VPureMix® ATEX LS5000	VPureMix® ATEX LS10000	VPureMix® ATEX LS20000
Mixing volume* [L]	3 - 35	35 - 70	70 - 200	200 - 700	700 - 1,100	1,100 - 2,300	2,300 - 6,000	6,000 - 13,000	13,000 - 22,000
Voltage [V]	230/400	230/400	230/400	230/400	230/400	230/400	230/400	230/400	230/400
Nominal frequency [Hz]	50	50	50	50	50	50	50	50	50
rpm range** [rpm]	50 - 490	50 - 490	50 - 490	50 - 490	50 - 490	50 - 490	50 - 490	50 - 450	35 - 350
Motor power [kW]	0.12	0.12	0.12	0.37	0.55	0.75	1.5	2.2	2.2
Motor ratio	5	5	5	5	5	5	5	5	7.5
Mixing head diameter [mm]	82	96	120	142	160	184	190	225	273

* Mixing volume with dynamic viscosity of 1 mPas and density of 1,000 kg/m³

** Speed control in the mentioned speed range only possible by means of frequency converter. Frequency range about 9-90 Hz

Technical data VPureMix® ATEX Magnetic Coupled Mixer

Technical Parameters

VPureMix® ATEX magnetic coupled mixer ATEX label:



II 2/3G Ex h IIB T4 Gb/Gc

Mixing head with female bearing:

Mixing head:

Shape: Impeller

Number of mixing blades: 4

Material: 1.4435 (AISI 316L), delta ferrite content $\leq 1\%$

Surface: polished and electro-polished $Ra \leq 0.5 \mu m$ (20 μin)

Female bearing:

Material: Silicon carbide SSiC

Surface: $Ra \leq 0.5 \mu m$

Working temperature:

0°C/32°F to 150°C/302°F

Male bearing with gasket:

Male bearing:

Material: Zirconium dioxide ZrO_2 (Mg-PSZ), base 1.4435

Surface: $Ra \leq 0.5 \mu m$

Working temperature: 0°C/32°F to 150°C/302°F

Gasket:

Shape: O-ring

Material: EPDM (standard); FKM; FFKM, VMQ (optional)

Tank plate

Material:

1.4435 (AISI 316L), delta ferrite content $\leq 1\%$

Surface:

polished and electro-polished $Ra \leq 0.4 \mu m$ (16 μin)

Design pressure:

-1 bar/-14 psi to 7 bar/ 101.5 psi

Design temperature:

-80°C/176°F to 200°C/392°F

Drive unit:

Worm gear IEC motor for frequency converter operation

Motor type:

ATEX three-phase asynchronous motor

Transmission:

Universal SI worm gear units

Voltage:

230/400 V AC

Frequency:

50 Hz

Protection type:

IP66

Thermal motor protection:

PTC thermistor

ATEX label:



II 2G Ex de IIC T4

Ambient temperature:

-20°C/68°F to 40°C/104°F

Paint:

RAL 4008 signal violet

Magnetic field sensor (optional):

Function:

Speed and direction of rotation query

ATEX label:



II 3 G Ex nA IIC T4 Gc



II 3 D Ex tc IIIC T100°C Dc

Connection:

Plug connector, M12x1

Area of application:

Viscosity range:

1 to 800 cP

pH range:

1 to 14

Available certificates and measurement protocols for components in contact with the product:

Acceptance test certificate according to DIN EN 10204-3.1 and restamping certificate

Male bearing and female bearing: Biocompatibility according to USP Class VI

O-ring elastomers: FDA, USP Class VI, 3-A Sanitary Standard

Measurement protocols of delta ferrite content

Measurement protocols of surface roughness

Overview VPureMix® ATEX Magnetic Coupled Mixer

VPureMix® ATEX LS30, LS50, LS100

ATEX LS30

ATEX LS50

ATEX LS100



Mixing head with female bearing



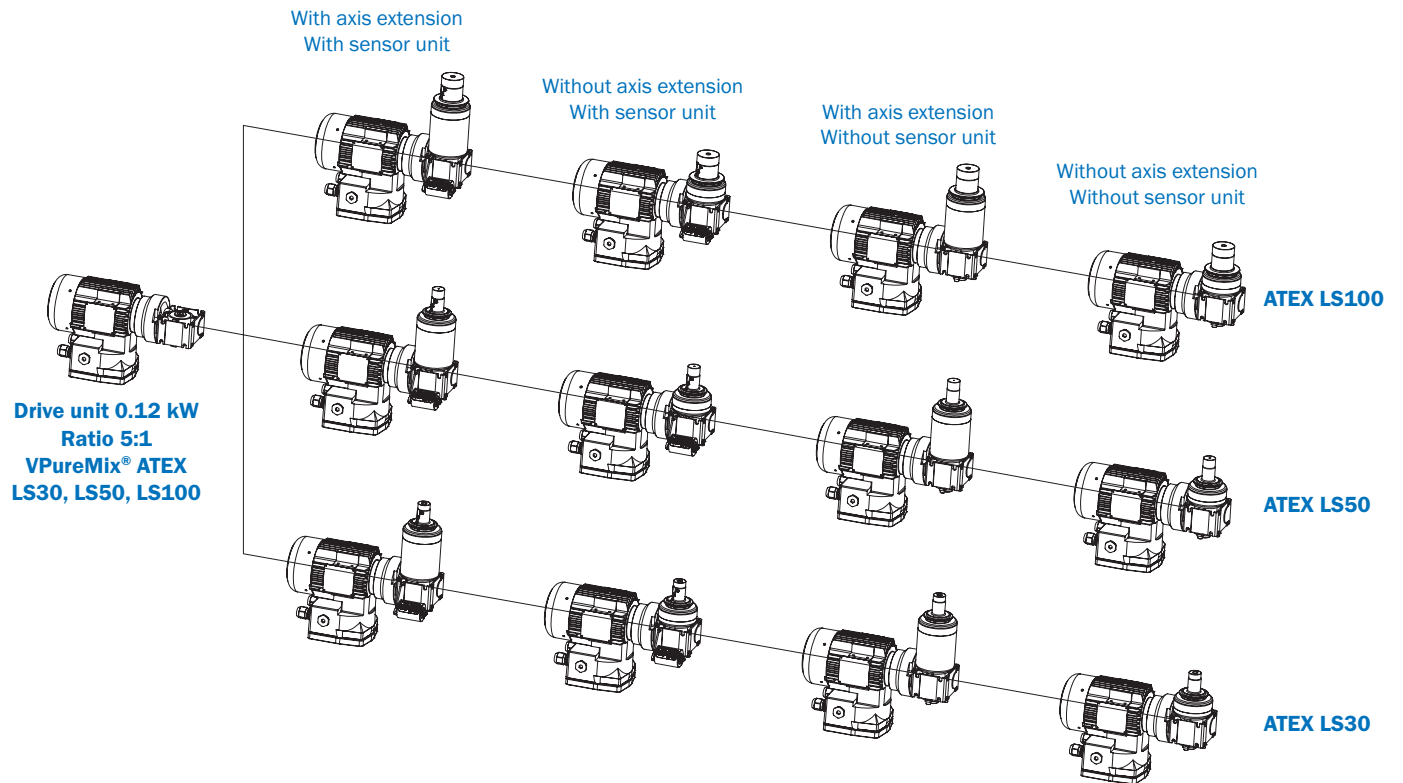
Male bearing Ø 12 mm



O-ring gasket: EPDM (standard)
FKM, FFKM, VMQ (optional)



Tank plate



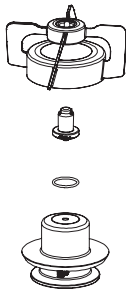
Overview VPureMix® ATEX Magnetic Coupled Mixer

VPureMix® ATEX LS500, LS1000, LS2000

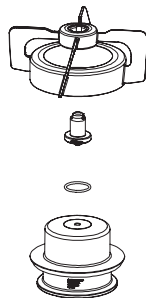
ATEX LS500



ATEX LS1000



ATEX LS2000

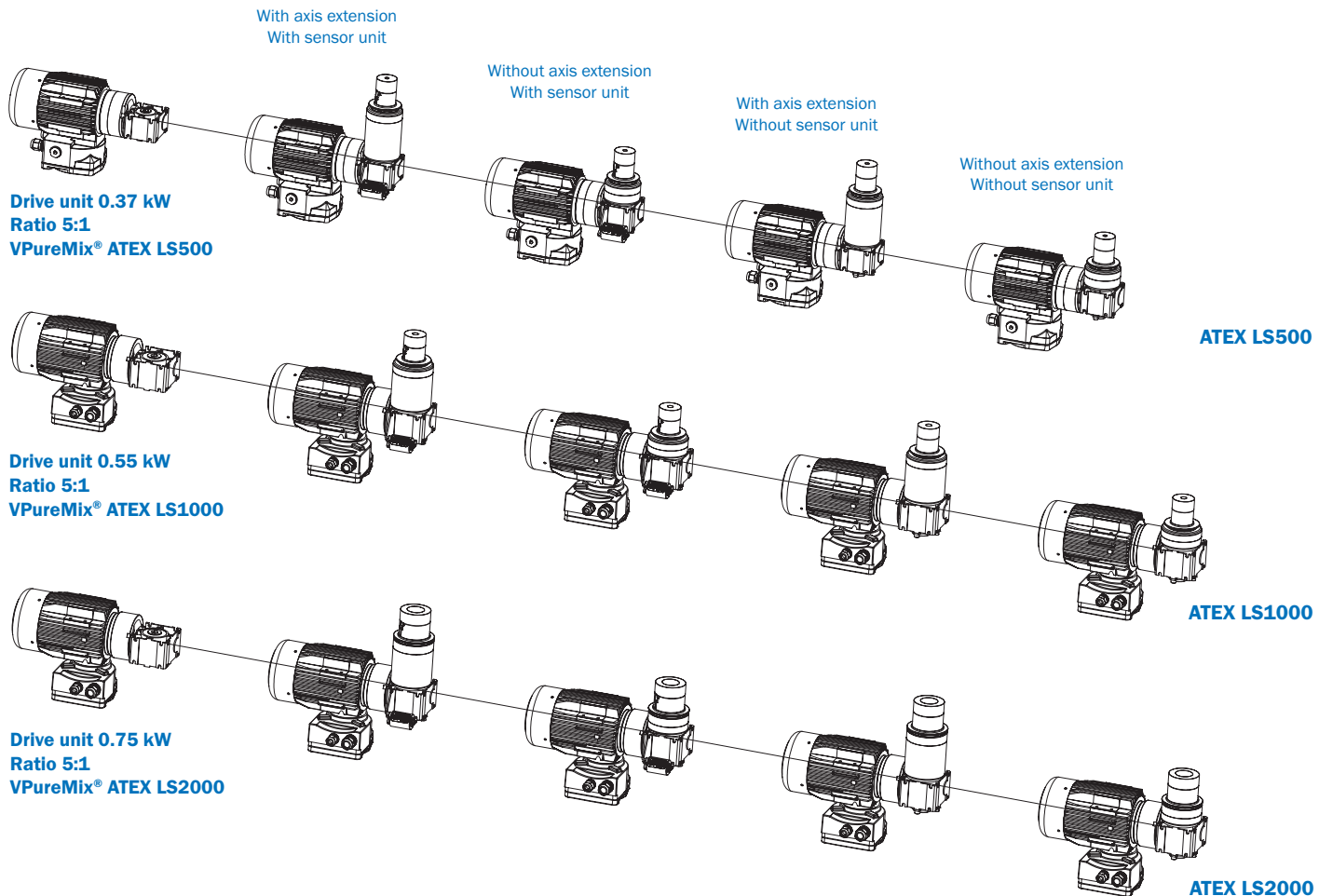


Mixing head with female bearing

Male bearing Ø 20 mm

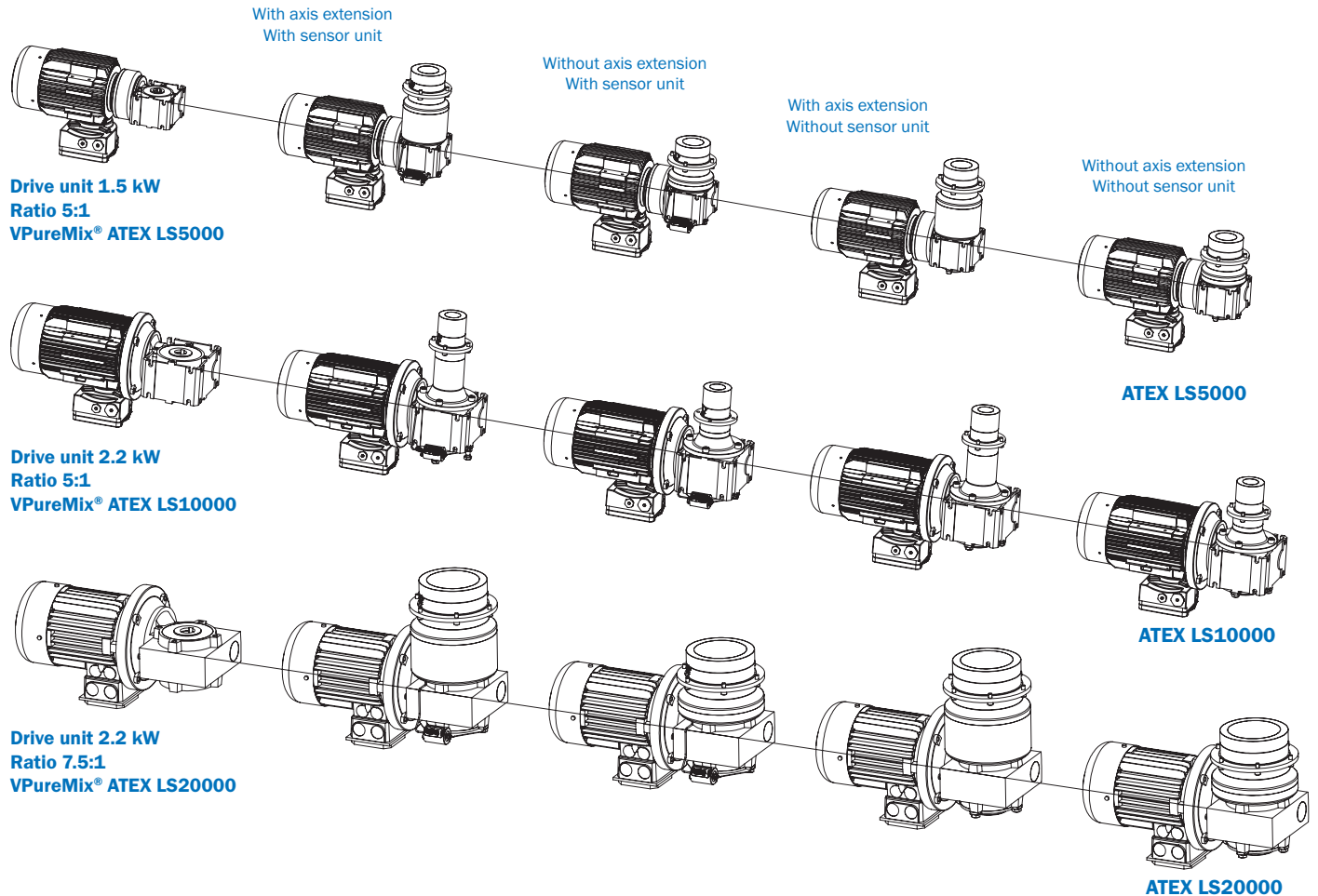
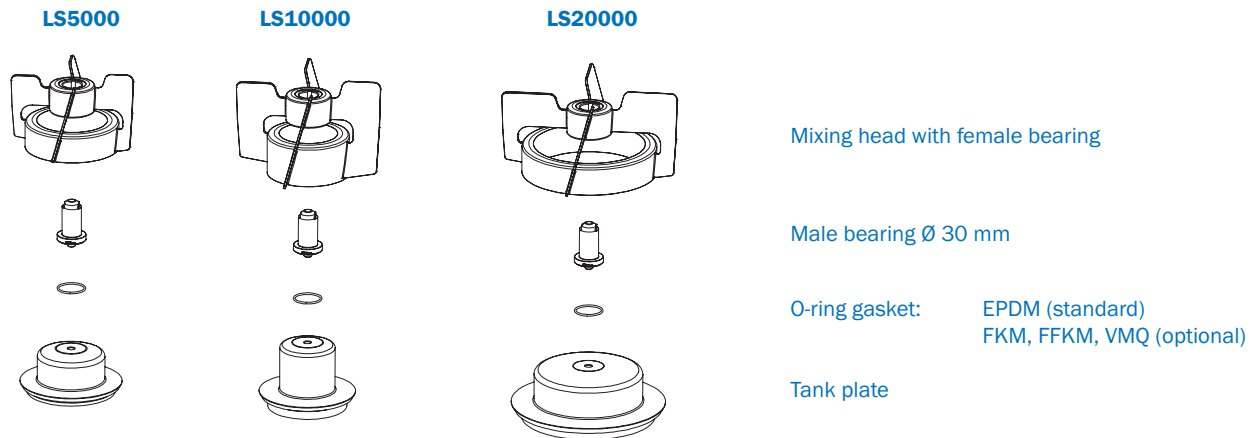
O-ring gasket: EPDM (standard)
FKM, FFKM, VMQ (optional)

Tank plate



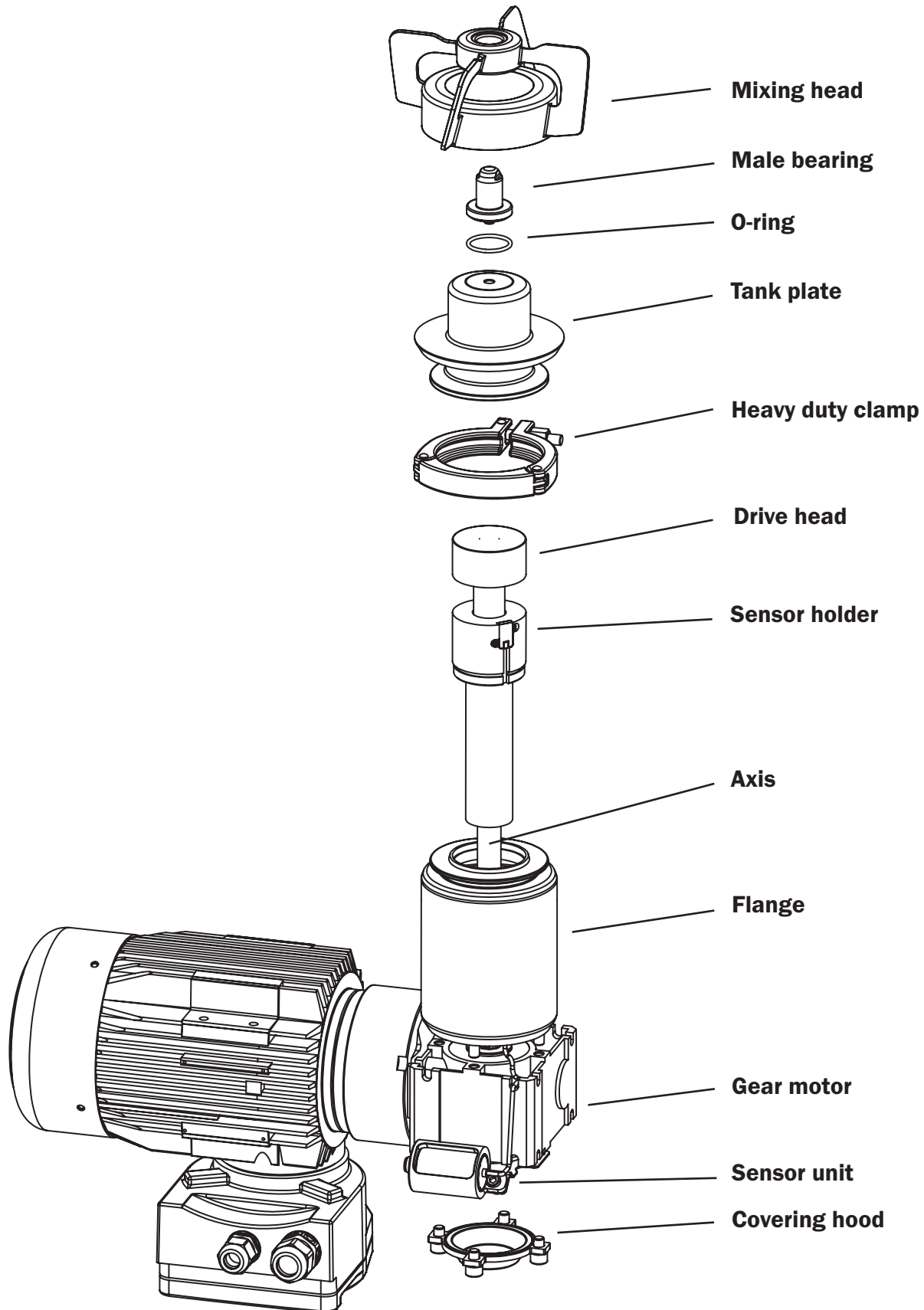
Overview VPureMix® ATEX Magnetic Coupled Mixer

VPureMix® ATEX LS5000, LS10000, LS20000



Configuration Examples VPureMix® ATEX

VPureMix® ATEX LS1000 with Axis Extension, with Sensor Unit



Configuration Examples VPureMix® ATEX

VPureMix® ATEX LS5000 without Axis Extension, with Sensor Unit

